MORTGAGE BANKING

JUNE 1984

The Magazine of Real Estate Finance

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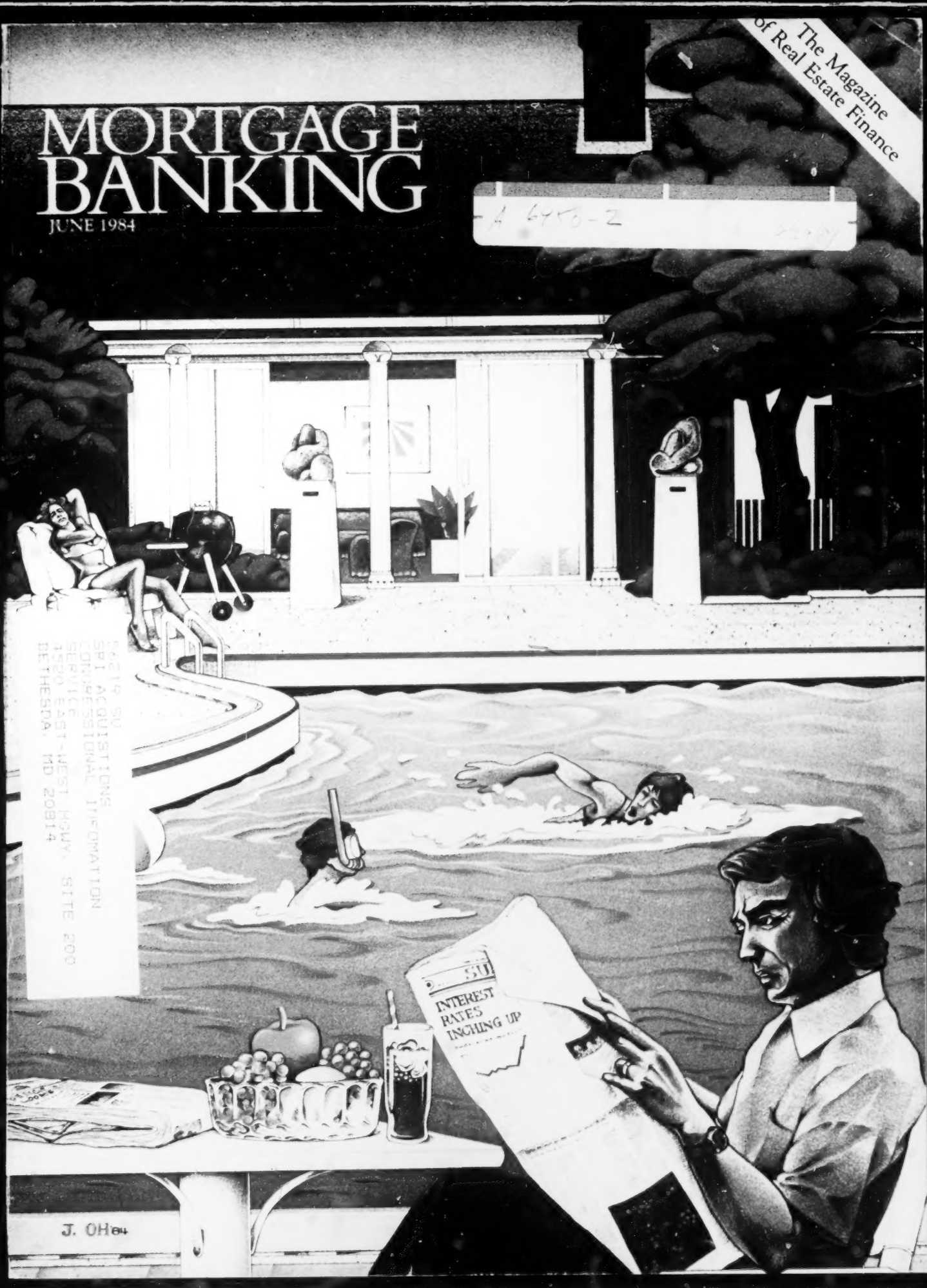

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MORTGAGE BANKING

Volume 44 No. 10
June 1984

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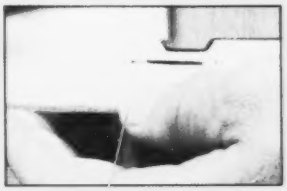

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Published monthly since 1939 by the Mortgage Bankers Association of America

Business and Editorial Offices
1125 15th Street, N.W.
Washington, D.C. 20005
Editorial (202) 861-6560
Advertising (202) 861-6555
Circulation (202) 861-6579

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Second class postage paid at Washington, D.C. and additional mailing offices. Subscription orders should be sent to P.O. Box 37236, Washington, D.C. 20013. Letters, manuscripts, change of address, and all other correspondence should be sent to Mortgage Banking 1125 15th Street, NW, Washington, D.C. 20005. Six to eight weeks are required for a change of address. Along with new address, send last magazine label.

CROWDING OUT?

AN ANALYSIS OF CREDIT SUPPLY AND DEMAND

Bernard M. Markstein III

Much public discussion has centered on the anticipated size of the federal government deficit over the next several years. Projections call for the deficit to continue near record highs in the immediate future. Chase Econometrics is not alone in its projections for the deficit: the Administration, Congress, and other forecasters have produced similar figures. More disturbing, the deficit projections are not significantly lower for higher Gross National Product (GNP) growth paths. Among the many factors contributing to this result are the indexation of taxes, accelerated defense spending, and benefit increases for Social Security recipients. The first reduces the beneficial effects on the deficit of bracket creep, and the latter two will widen the deficit on the expenditure side.

In the recent past, large deficits were not only acceptable but were even desirable—they provide needed stimulus to the economy. The economy was able to absorb them because of low private credit demands. It is later in the recovery that problems arise. In the past, private credit demands have increased as a recovery proceeds. Simultaneously the deficit has fallen—generally in absolute terms, as well as relative to GNP—permitting the rising private credit needs to be funded. This time, however, it appears that the deficit will remain high both in absolute terms and relative to GNP. Will the economy be able to fund private credit needs properly or will there be crowding out?

The results of Chase Econometrics' research indicate that through 1984 the large government deficits will not crowd out private investment, but that starting in early 1985 there will be increased competition for funds due to rising private credit demands. This will lead to some crowding out.

The supply of credit

Pioneering work has been done by Dr. Benjamin M. Friedman, a Professor of Economics at Harvard University, indicating a strong historical relationship between total domestic nonfinancial credit and GNP.[1] Dr. Friedman has found this ratio to be almost constant over the 1960 to 1980 period; there has been only a slight trend upward, with

continued

This article was adapted from a presentation given at the Atlantic City Economic Outlook Forum, "Forecast and Planning Issues for 1984."

ILLUSTRATION BY BYRON PECK/EGLY ASSOCIATES

Figure 1

Domestic nonfinancial debt as a percent of GNP

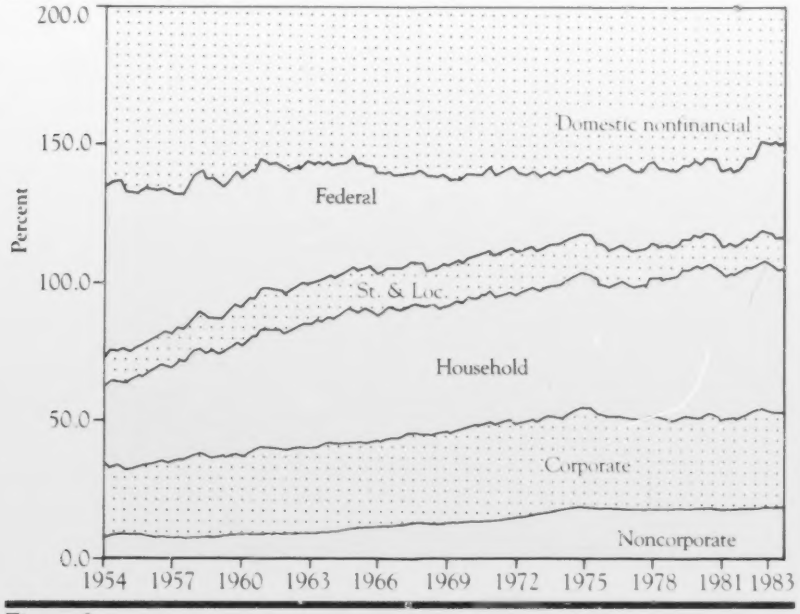

Figure 2

Projected credit supply and demand relative to GNP

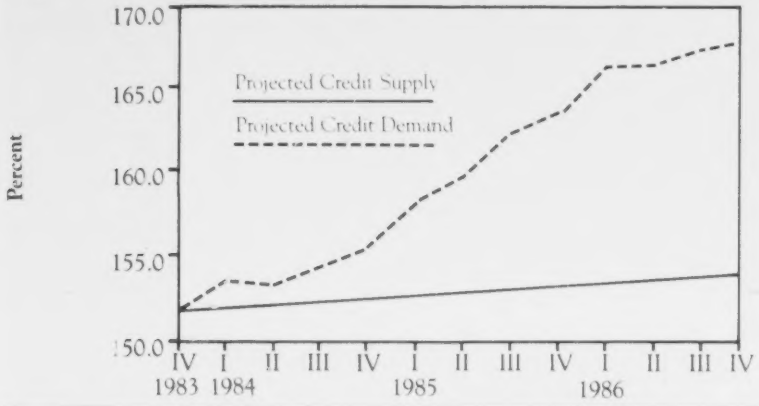

Table 1

Credit Supply Projections

Date	Domestic Nonfinancial Debt-GNP Ratio	GNP $ Billions	Domestic Nonfinancial Credit Supply $ Billions
1984.1	151.99	3519	5348
1984.2	152.14	3595	5469
1984.3	152.29	3679	5602
1984.4	152.45	3759	5731
1985.1	152.60	3841	5861
1985.2	152.76	3911	5975
1985.3	152.91	3985	6093
1985.4	153.07	4065	6222
1986.1	153.22	4163	6378
1986.2	153.37	4274	6555
1986.3	153.53	4384	6731
1986.4	153.69	4501	6917

almost negligible cyclical movements. (See Figure 1.) Whatever cyclical movements there are result from the fact that the numerator—total domestic non-financial credit—is a stock that changes slowly, while the denominator—nominal GNP—is a flow that changes more rapidly. Hence, during a recession the ratio tends to rise somewhat (note particularly the recent 1981-83 period) while during an expansion phase it declines. Yet over longer periods of time the ratio is very stable.

This stability occurs despite considerable variation in the components. Total domestic nonfinancial debt represents the stock of outstanding debt instruments issued by nonfinancial entities (entities that are not banks or thrift institutions). These include nonfinancial businesses (corporations, farms, partnerships), households, state and local governments, and the federal government. Nonfinancial federal government debt excludes such financial governmental borrowings as those of the various federally sponsored credit agencies, such as the Government National Mortgage Association (GNMA), and mortgage pools.

In the early 1950s, the federal portion of this debt was considerable, due to debt remaining from World War II. This share was gradually reduced as the economy grew faster than new debt was acquired, to a low in 1974. From that nadir the federal government share has again grown.

The decline in the federal government portion of domestic nonfinancial debt has allowed the business and household shares to grow. Most of the growth in the household share can be traced to increased mortgage borrowing—much of it encouraged by federal programs and policies. *continued*

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Table 2

Credit Demand Projections
($ Billions)

Date	Federal Government	State & Local Government	Household
1984.1	1242	405	1889
1984.2	1258	412	1946
1984.3	1302	415	2015
1984.4	1367	416	2063
1985.1	1434	426	2148
1985.2	1450	437	2239
1985.3	1500	442	2335
1985.4	1574	445	2394
1986.1	1645	454	2501
1986.2	1652	468	2609
1986.3	1696	475	2725
1986.4	1764	479	2808

Date	Nonfinancial Corporations	Other Nonfinancial Business	Total Domestic Nonfinancial Credit Demand
1984.1	1173	688	5397
1984.2	1189	705	5510
1984.3	1224	719	5675
1984.4	1252	737	5835
1985.1	1294	763	6065
1985.2	1323	784	6234
1985.3	1371	809	6457
1985.4	1408	823	6643
1986.1	1459	860	6918
1986.2	1489	887	7105
1986.3	1534	910	7340
1986.4	1581	931	7562

Table 3

Credit Supply and Demand
($ Billions)

Date	Total Domestic Nonfinancial Credit Supply	Total Domestic Nonfinancial Credit Demand	Supply-Demand
1984.1	5348	5397	–49
1984.2	5469	5510	–41
1984.3	5602	5675	–73
1984.4	5731	5835	–104
1985.1	5861	6065	–204
1985.2	5975	6234	–259
1985.3	6093	6457	–364
1985.4	6222	6643	–421
1986.1	6378	6918	–540
1986.2	6555	7105	–550
1986.3	6731	7340	–609
1986.4	6917	7562	–645

Friedman has tested the stability of the overall ratio—domestic nonfinancial debt to GNP—and found it to be as good as or better than many comparable measures, including the money supply-GNP relationship. Further, when he extended his study to four other major industrial countries (Canada, Germany, Japan, and the United Kingdom) he found similar overall stability in the credit ratio.[2]

Based on this strong historical evidence, the credit supply may be forecast by extrapolating the credit ratio through the end of 1986. Table 1 presents historical and extrapolated values along with GNP figures (including forecast figures) and the implicit total domestic nonfinancial credit levels. This extrapolation is the supply of domestic nonfinancial credit in the sense that it represents the willingness of the economy to hold domestic nonfinancial debt. The extrapolation lies within the Federal Reserve's target range of growth for domestic nonfinancial credit.

The demand for credit

The projection for credit demand is based on experience coming out of the 1973-75 recession. The choice of this period was made for two reasons. First, the 1981-82 and 1973-75 recessions were very similar. They were of equal length (17 months, peak to trough) and of similar severity. Second, the recovery phase from the 1981-82 recession has had a similar profile to that after the 1973-75 recession and is forecast to proceed on a similar path.

The quarterly growth rates of nonfinancial debt for households, corporations, non-corporate businesses, and state and local government for the 1975-80 recovery period were calculated. A projection of the level of debt for each sector through the end of 1986 was made using these rates. To calculate the federal nonfinancial debt, the deficit for each quarter was added to the level of U.S. debt. Table 2 shows the individual sector projections and the total credit demand.

continued

Table 4

Net Funds Raised in the Credit Market

Date	Total Domestic Nonfinancial Borrowing Bil. of $	Federal Government Borrowing Bil. of $	Federal Government Borrowing % of Total	Private Domestic Borrowing Bil. of $	Private Domestic Borrowing % of Total
1973	188.2	8.3	4.4	180.0	95.6
1974	175.1	11.8	6.7	163.3	93.3
1975	194.6	85.4	43.9	109.2	56.1
1976	243.8	69.5	28.5	174.3	71.5
1977	321.4	56.8	17.7	264.7	82.3
1978	364.0	53.7	14.7	310.4	85.3
1979	386.1	37.4	9.7	348.8	90.3
1980	342.6	79.2	23.1	263.4	76.9
1981	377.0	87.4	23.2	289.6	76.8
1982	386.3	161.3	41.7	225.0	58.3
1983	508.8	186.6	36.7	322.3	63.3

Source: Flow of Funds

Table 4a

Private Domestic Borrowing

Date	State & Local Bil. of $	State & Local % of Total	Household Bil. of $	Household % of Total
1973	12.3	6.5	79.6	42.3
1974	15.5	8.9	53.7	30.7
1975	13.7	7.1	51.9	26.7
1976	15.2	6.2	90.5	37.1
1977	15.4	4.8	137.6	42.8
1978	19.1	5.3	167.7	46.1
1979	20.5	5.3	177.0	45.9
1980	20.3	5.9	119.9	35.0
1981	9.7	2.6	125.4	33.3
1982	36.3	9.4	80.2	20.8
1983	36.0	7.1	157.8	31.0

Source: Flow of Funds

Date	Corp. Business Bil. of $	Corp. Business % of Total	Noncorp. Business Bil. of $	Noncorp. Business % of Total
1973	48.8	25.9	39.3	20.9
1974	66.2	37.8	27.9	16.0
1975	21.0	10.8	22.5	11.6
1976	43.0	17.6	25.6	10.5
1977	71.2	22.1	40.6	12.6
1978	78.5	21.6	45.0	12.4
1979	95.4	24.7	55.8	14.5
1980	75.5	22.0	47.6	13.9
1981	98.8	26.2	55.8	14.8
1982	75.6	19.6	32.9	8.5
1983	56.9	11.2	71.6	14.1

Supply and demand

The results of the supply and demand projections are summarized in Table 3. The third column of the table is the difference between supply and demand. Of course, on an *ex post facto* basis, the amount lent and the amount borrowed are always equal. Thus, the third column represents a measure of the pressure on interest rates. Excess supply (a positive value) represents downward pressure on interest rates, and excess demand (a negative number) upward pressure. The changes in rates would have the usual effect—lower rates producing increased demand and reduced supply, higher rates the reverse. Thus Table 3 indicates that upward pressure on interest rates may begin to be felt in mid-1984 and may continue to build progressively throughout 1985.

Given the method of deriving these estimates, excess demand of under $75 billion does not necessarily represent a serious mismatch of supply and demand. If excess demand of that magnitude is not due to statistical error, a relatively small increase in interest rates would bring about equilibrium with only minor private sector crowding out.

Excess demand of over $75 billion probably does represent true upward pressure on interest rates. Clearly, by 1985, excess demand grows to the point that interest rates will have to rise. Figure 2 shows the supply and demand graphs in terms of their relationship to GNP.

Why does pressure on credit markets build in 1984 and 1985 when similar pressure did not occur in 1976-77? The answer is, of course, federal deficits. Taking the ratio of deficits to GNP, in both the 1973-75 recession and the 1981-82 recession, deficits peaked at just over 6 percent of GNP. However, where in the recovery following the 1973-75 recession deficits quickly fell back to the 1-2 percent range, Chase Econometrics' projections are for deficits to remain above 4 percent of GNP through 1985. These estimates are in agreement with those of the Reagan Administration and the Congressional

continued

Table 5

Private Funds' Availability Relative to Federal Funding Needs Under Alternative Scenarios

Date	Total Funds Available: Projected Available Funds*	Fed's Lower Target Bound*	Fed's Upper Target Bound*
1984.1	129.45	101.38	137.95
1984.2	120.98	103.35	141.60
1984.3	132.84	105.36	145.34
1984.4	128.33	107.41	149.18
1985.1	130.41	109.49	153.13
1985.2	114.06	111.62	157.17
1985.3	117.95	113.79	161.33
1985.4	128.90	116.00	165.59
1986.1	156.43	118.25	169.97
1986.2	177.14	120.55	174.46
1986.3	175.90	122.89	179.07
1986.4	185.74	125.28	183.81

Date	Federal Demand For Funds: Federal Government Demand For Funds*	As a % of Projected Available Funds	As a % of Fed's Lower Bound	As a % of Fed's Upper Bound
1984.1	64.39	49.74	63.52	46.68
1984.2	15.75	13.01	15.23	11.12
1984.3	43.92	33.06	41.69	30.22
1984.4	64.52	50.28	60.07	43.25
1985.1	67.51	51.76	61.66	44.09
1985.2	15.82	13.87	14.17	10.07
1985.3	49.73	42.17	43.71	30.83
1985.4	74.24	57.59	64.00	44.83
1986.1	70.70	45.20	59.79	41.60
1986.2	7.65	4.32	6.35	4.39
1986.3	43.56	24.77	35.45	24.33
1986.4	67.87	36.54	54.17	36.93

Date	Private Credit Availability: As a % of Projected Available Funds	As a % of Fed's Lower Bound	As a % of Fed's Upper Bound
1984.1	50.26	36.48	53.32
1984.2	86.99	84.77	88.88
1984.3	66.94	58.31	69.78
1984.4	49.72	39.93	56.75
1985.1	48.24	38.34	55.91
1985.2	86.13	85.83	89.93
1985.3	57.83	56.29	69.17
1985.4	42.41	36.00	55.17
1986.1	54.80	40.21	58.40
1986.2	95.68	93.65	95.61
1986.3	75.23	64.55	75.67
1986.4	63.46	45.83	63.07

* $ Billions

Budget Office. Even more disquieting, our forecast is not changed appreciably by altering the growth path for GNP.

Sensitivity of estimates

The nature of the data and the methodology for this study suggest that the specific numbers and timing could vary somewhat. Hence, caution is required in their application. Before addressing this point more directly, it is useful to look at the problem from a different perspective. Table 4 presents a table of net new funds raised (excluding equity) from 1973 through 1983 by domestic borrowers divided into federal government borrowing and private borrowing (which includes state and local government borrowing) along with each sector's percentage share of total funds raised. Table 4a provides a breakdown of private borrowing by major sector and each sector's percentage of total domestic nonfinancial funds raised. Table 5 shows the percentage of funds available for nonfederal borrowing under different assumptions.

The assumptions are:

- credit supplied grows by the amount projected above,
- available credit grows according to the Federal Reserve Board's target range of growth for domestic nonfinancial credit.

The latter is broken into two cases:

- available credit grows according to the Fed's 1984 lower target bound of 8 percent, and
- available credit grows according to the Fed's 198 / upper target bound of 11 percent.

For each assumption the federal government's demand for funds as a percentage of total available funds has been calculated to determine the residual percentage of funds available for private borrowing needs. Clearly pressure builds throughout 1985.

Accuracy of supply estimates

The projection for supply may be a little optimistic because the figures key off of the data for fourth quarter 1983. Because the ratio of domestic nonfinancial debt to GNP was high in that period

continued

due to the cyclical effects, there is a slight upward bias to the projections. Thus from the supply side, it is more likely that the pressure on the financial markets will build slightly sooner rather than later.

On the other hand, there is a small chance that the estimate may prove too low because foreign inflows and a higher personal savings rate might add to the supply of funds, moving the pressure to a later date or eliminating it all together. The latter seems very unlikely, however. At best such developments might delay the problem by a quarter or two. Recent foreign purchases of Treasury securities have not exceeded the 1977 figure of $3..5 billion, which represents only about 15 percent of the 1983 deficit and an even smaller percentage of the anticipated shortfall between supply and demand for credit in 1985.

The net inflows of foreign funds to the credit market have not been much different in absolute size—the top figure to date is the 1981 inflow of about $60 billion. About $31 billion came in from foreigners in 1983 (about $17 billion of that to purchase Treasury securities). An increase in savings also would do little to help. This can be seen in Table 6, which is a reproduction of Table 13 from the article "Federal Deficits and Private Credit Demands: Economic Impact Analysis" by James R. Capra in the Federal Reserve Bank of New York Quarterly Review for Summer 1983.

Table 6

Saving as a Percentage of GNP
(Calendar Year)

Item	1961 to 1970	1971 to 1980	1985 Projection
Gross Private Saving	**16.4**	**16.9**	**17.5**
Personal	4.7	4.9	4.0
Business	11.7	12.0	13.5
Total Use of Saving	**16.4**	**16.9**	**17.5**
Less:			
Financing the Federal Deficit	0.5	1.9	5.9
Other*	0.5	–0.9	–2.6
Equals:			
Amount Available For Gross Private Investments	15.4	15.9	14.2
Addendum:			
Capital Consumption Allowance	8.4	9.9	11.0
Amount Available For Net New Private Investments	**7.0**	**6.0**	**3.2**

**Includes net foreign investment and state and local deficits.*
Source: Federal Reserve Bank of New York.

Accuracy of demand estimates

On the demand side, estimates could be a bit too high, because the present recovery may prove weaker than the recovery from the 1973-75 recession, although to date it has proved to be remarkably strong. This would push the credit conflict to a later date.

Alternatively, the estimate of credit demand could possibly prove too low because of the tax cuts. With the exception of the small 1975 tax rebates, there were no tax cuts in the recovery following the 1973-75 recession-hence our estimates do not account for them. Together with pent-up consumer demand for durable goods, the cuts might increase demand and move the problem to an earlier date.

Accuracy of timing estimates

The timing of pressures in the credit market outlined in this analysis represents the most likely projection. While crowding out could occur in the credit markets at an earlier date, it is unlikely to be postponed to a later period. A reasonable subjective probability distribution would be that there is a 65 percent probability that crowding out will begin to occur in early 1985; a 25 percent probability it will begin to occur by mid-1984; an 8 percent probability it will not occur until 1986; and a 2 percent probability it will not occur at all.

Pressures on the credit markets are likely to rise in early 1985 and increase throughout the year. Available domestic nonfinancial credit was estimated by extrapolating from its historical relationship to GNP. Demand for credit was projected based on the experience following the 1973-75 recession and the forecast of the federal deficit. The economy should be able to accommodate credit demands through 1984, but after that demand pressures will grow progressively higher.

The result of growing credit demand will be higher interest rates later in 1984 and in the first half of 1985. By the end of 1984, Treasury bills will be trading near 10.5 percent on a yield basis, up about 50 basis points from current levels. Long-term Treasuries will move up about the same amount from current levels, bringing them just above 13 percent. Rates are expected to peak during the first half of 1985 at levels as high as 13 percent for Treasury bills and 14.5 percent for long-term bonds. □

[1] *Benjamin M. Friedman, "Debt and Economic Activity in the United States," National Bureau of Economic Research, Reprint No. 278.*

[2] *Benjamin M. Friedman, "Money, Credit and Nonfinancial Economic Activity: An Empirical Study of Five Countries," National Bureau of Economic Research, Working Paper No. 1033.*

MORTGAGE MARKETS AND MORTGAGE-RELATED SECURITIES:

DEVELOPMENTS AND IMPLICATIONS

Dr. Frederick E. Flick

The recovery of the housing market in 1983 resulted primarily from a 300 basis point drop in the mortgage interest rate over the latter part of 1982. This decline in mortgage financing costs caused privately owned housing starts to surge to 1,701,300 units in 1983—60 percent higher than the 1982 level of 1,062,200 units and the highest annual total since 1979. In a slightly less dramatic rally, sales of existing single-family homes totaled 2.72 million units in 1983, an increase of 36.6 percent over the dismal 1.99 million level of 1982.

Although the interest rate decline was the most influential factor spurring the boom of 1983, structural changes within the savings and loan industry and changes within the entire mortgage lending system also played a major role. The most important of these system-wide changes was the increased use of the secondary market by primary lenders and the introduction of new mortgage-related securities. These developments appear to have permanently changed the relationship of primary mortgage lending to the secondary market.

The recovery

Originations of one- to four-family (nonfarm) mortgage loans rose to an all-time high of $199.4 billion in 1983. In fact, this record-setting volume was greater than the sum of total originations for both 1981 and 1982. Although most institutional mortgage lenders substantially increased their volume of residential loan originations in 1983, as a group, savings and loan associations (S&Ls) bounced back from a 1982 level of $34.8 billion to just over $81.5 billion in 1983. This volume amounted to a 134 percent increase over 1982 and pushed their 1983 relative percentage share of residential originations to 41 percent of the market.

Mortgage bankers also staged a solid 1983 performance, originating almost $60 billion of loans. This amounted to an increase of 114 percent over their 1982 volume and was an all-time high for their industry. Commercial banks and mutual savings banks also produced sound comebacks with each just about doubling its origination volume over the previous year. Tables 1(a) and 1(b) document these trends for the dollar

continued

Table I (a)

Total Originations of One- to Four-Family
(Nonfarm) Mortgage Loans: 1970–1983
(Dollars in Billions)

Year	Savings and Loan Associations	Mutual Savings Banks	Mortgage Companies	Commercial Banks	Others	Total
1970	14.81	2.15	8.91	7.80	1.92	35.59
1971	26.60	3.54	12.49	12.60	2.56	57.79
1972	36.74	5.05	13.33	17.71	3.04	75.86
1973	38.44	5.91	12.66	18.78	3.33	79.13
1974	30.93	3.93	13.03	16.13	3.49	67.51
1975	41.24	4.33	13.99	14.45	3.90	77.91
1976	61.90	6.43	15.74	24.50	4.21	112.79
1977	86.30	8.66	25.65	36.68	4.68	161.97
1978	89.95	9.38	34.45	43.92	7.33	185.04
1979	82.83	8.96	45.26	40.66	8.89	186.60
1980	61.10	5.44	29.42	28.78	9.04	133.77
1981	41.98	4.02	23.96	21.69	6.56	98.21
1982	34.78	4.00	28.00	25.19	4.98	96.95
1983	81.52	10.73	59.93	42.36	4.91	199.45

Table I (b)

Market Shares of Originations of
One- to Four-Family Mortgage Loans: 1970–1983
(Percent)

Year	Savings and Loan Associations	Mutual Savings Banks	Mortgage Companies	Commercial Banks	Others
1970	41.6 %	6.0 %	25.0 %	21.9 %	5.4 %
1971	46.0	6.1	21.6	21.8	4.4
1972	48.4	6.7	17.6	23.3	4.0
1973	48.6	7.5	16.0	23.7	4.2
1974	45.8	5.8	19.3	23.9	5.2
1975	52.9	5.6	18.0	18.5	5.0
1976	54.9	5.7	14.0	21.7	3.7
1977	53.3	5.3	15.8	22.6	2.9
1978	48.6	5.1	18.6	23.7	4.0
1979	44.4	4.8	24.3	21.8	4.8
1980	45.7	4.1	22.0	21.5	6.8
1981	42.7	4.1	24.4	22.1	6.7
1982	35.9	4.1	28.9	26.0	5.1
1983	40.9	5.4	30.0	21.2	2.5

Source: *The Supply of Mortgage Credit 1970–1979*; and selected reports of the "Survey of Mortgage Lending Activity," for the Fourth Quarter 1981, Fourth Quarter 1982, and for the year 1983.
Office of Financial Management, U.S. Department of Housing and Urban Development, Washington, D.C.

volume and percentage shares of residential loans made by these four major lender types.

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Money Market Deposit Accounts

An important factor in supplying the thrifts with increased loanable funds in 1983 was the introduction of money market deposit accounts (MMDAs) in the spring of 1982. According to the FHLBB,[1] these accounts provided almost $34 billion in deposits in 1982 and, by the end of 1983, outstanding MMDA balances totaled $104.3 billion. MMDAs accounted for about 17 percent of the $617.8 billion in total thrift deposits outstanding at the close of 1983. The FHLBB sources and uses of funds data show a remarkable improvement in S&L liquidity over the 1981-1982 period. Although thrifts reduced their holdings of liquid assets in the last half of 1983, year-end holdings totaled $76.6 billion (10.2 percent of assets)

continued

compared with $68.9 billion (9.9 percent of assets) at the end of 1982. The 1983 end-of-year liquidity ratio (cash and other liquid assets as a percent of deposits and short-term borrowings) was 11.46 percent—6.46 percent above the 5 percent required by FHLBB regulations. At the end of the fourth quarter of 1982, it was 11.29 percent, while a year prior to that it had been only 8.47 percent.

Restructuring

The restructuring of S&L portfolios that began in 1981, was the major factor that eventually allowed the increased volume of thrift mortgage lending in 1982 and 1983.[2] Through this restructuring process, which is still continuing, the S&Ls learned to rely more extensively on the secondary market. The programs of the Federal Home Loan Mortgage Corporation (FHLMC/"Freddie Mac") and the Federal National Mortgage Association (FNMA/"Fannie Mae") provided greatly needed assistance in helping them to decrease their holdings of low-yielding mortgage loans. As part of their restructuring operations, low-yielding, seasoned mortgages were either sold for cash or "swapped" for Freddie Mac Participation Certificates (PCs) or Fannie Mae Conventional Mortgage-Backed Securities (CMBSs). These securities could be used both to satisfy regulatory standards for mortgage holdings and to increase S&L balance sheet liquidity. Furthermore, mortgage-backed securities can be used as collateral for borrowing in the money markets (i.e., through term repurchase agreements). The FHLMC Guarantor swap programs—amounting to $21.94 billion in 1982 and $15.54 billion in 1983—were an important contributor to thrift liquidity. Fannie Mae established a swap program for its CMBSs that amounted to $10.9 billion in 1982 and $9.03 billion in 1983. Freddie Mac also assisted thrifts through direct cash purchases of loans totalling $2.2 billion and 4.2 billion in 1982 and 1983, respectively. The Fannie Mae cash program supplied $3.1 billion in 1982 and $4.3 billion in 1983.[3]

"The two most obvious advantages to the CMO are the bond-like cash flow characteristics of the securities and the availability of several maturity classes."

The power to attract new savings and the restructuring of portfolios through swaps and loan sales were clearly the most important operational developments accounting for the renewed health of the thrifts. However, there were several other industry-wide changes that aided this restructuring and led to the improved performance of the S&Ls in 1982 and 1983. These changes included mergers of S&Ls to boost net worth, conversions of charters from mutual to stock ownership to raise equity, and liberalized Bank Board regulations allowing the deferral of capital losses from the sales of low-coupon mortgages. Nevertheless, the power to attract new savings and the overall portfolio changes were the major factors enabling the S&Ls to turn the corner. As a consequence of these operations, by late 1982, the average return on the mortgage portfolio began to exceed the average cost of funds, and the thrifts were on their way to more profitable days.

A record volume

The year 1983 set a new record for the use of secondary markets through the issuance of mortgage-backed securities. Originations of pass-throughs by the Federal Home Loan Mortgage Corporation, Federal National Mortgage Association, and Government National Mortgage Association (GNMA/"Ginnie Mae") exceeded 83.5 billion in 1983. For 1982, the volume of pass-throughs issued by these three agencies amounted to $54.15 billion. The volume of mortgage-backed securities issued in 1983 accounted for 42 percent of the volume of one-to four-family originations; and, in 1982, pass-throughs were 56 percent of new originations. Although the issuance of mortgage-backed securities as a percent of originations was lower in 1983 than in 1982, the stepped-up issuance volume for 1983 demonstrates the substantially higher reliance on the traditional secondary market mechanisms by primary market lenders.

This increasing reliance of primary market lenders on the secondary mortgage markets is dramatically shown by comparing the volume of mortgage sales and originations over the past few years. The Department of Housing And Urban Development (HUD) mortgage lending survey provides estimates of gross flows of new mortgage originations, purchases, and sales by mortgage market participants. These participants include the major primary market lenders, federal credit agencies, real estate investment trusts, life insurance companies, mortgage pools, and others. Unfortunately, there is some double-counting of transaction volume across some of the participant categories, and it is not possible to "net out" specific flows among those categories.[4]

While these data provide imperfect and even somewhat incomplete measures of secondary market activity, we can use them to construct a "ballpark" measure of the size of the secondary market relative to the primary market. Table II provides a time trend of total mortgage sales and total originations since 1970. The simple ratio of sales to originations can be interpreted as a broad, albeit crude, measure of the size of the secondary market relative to the primary market. While this measure includes sales of seasoned loans, a rough estimate of the percentage of new originations sold can be obtained by adjusting the sales volume for the FHLMC and

continued

Table II

Ratio of Total Mortgage Sales to Originations—
One- to Four-Family (Nonfarm) Mortgage Loans: 1970–1983

Year	Total Sales ($s in Billions)	Total Originations ($s in Billions)	Ratio of Sales to Originations (%)
1970	$ 14.19	$ 35.59	39.9 %
1971	18.53	57.79	32.1
1972	24.13	75.86	31.8
1973	24.86	79.13	31.4
1974	23.11	67.51	34.2
1975	29.65	77.91	38.1
1976	40.93	112.79	36.3
1977	55.36	161.97	34.2
1978	67.76	185.04	36.6
1979	76.59	186.60	41.0
1980	65.84	133.77	49.2
1981	53.19	98.21	54.2/51.8*
1982	100.57	96.95	103.7/69.9*
1983	148.12	199.45	74.3/61.9*

*Ratio adjusted for FHLMC and FNMA swaps to approximate the ratio of current year originations sold in the secondary market in those years.

Source: *The Supply of Mortgage Credit 1970–1979*; and selected reports of the "Survey of Mortgage Lending Activity," for the Fourth Quarter 1981, Fourth Quarter 1982, and for the year 1983.
Office of Financial Management, U.S. Department of Housing and Urban Development, Washington, D.C.

FNMA swaps in 1981, 1982, and 1983. These ratios for new loan sales are probably on the high side, and better estimates could probably be obtained by using yearly issuance figures for GNMAs (Ginnie Mae mortgage-backed securities) and the cash program for PCs and CMBSs in the calculation.

Based on the information presented in Table II, the secondary market increased to about 40 percent of the primary market by the end of the 1970s and by 1980 accounted for about one-half of the primary market. In 1982, the secondary market roughly equaled the primary market, but it slipped from this level in 1983. As far as estimating the percentage of new originations that are sold to the secondary market, after adjustment for FHLMC and FNMA swaps (which jointly totaled $2.31, $32.84, and $27.57 billions in 1981, 1982, and 1983, respectively) the figures suggest roughly 60 to 70 percent of new loans were sold in 1982 and 1983.

The fact that there is some double-counting in the sales figures still means that both sets of estimates are a bit high. Although it is difficult to estimate accurately the volume of new originations sold to secondary market investors, it is clear that these markets have grown substantially in both absolute size and relative volumes. In fact, since 1979, gross flows of sales have more than doubled, and the unadjusted ratio has almost doubled. According to these adjusted figures (there were no swaps prior to 1981), the sales-to-originations ratio has increased by 50 percent. Even if these estimates are a bit optimistic, the obvious trend is toward increased use and development of the secondary markets. Indeed, these calculations suggest that for the last couple of years, the entire housing finance system has been functioning in a mortgage banking mode of operation.

Collateralized mortgage obligation bonds

Not only was 1983 a high volume year for the traditional types of mortgage-backed securities, but it was a watershed year for the introduction of the first generation of fast-pay/slow-pay mortgage-backed bonds. In June 1983, the Federal Home Loan Mortgage Corporation introduced the first mortgage-backed bond, known as a Collateralized Mortgage Obligation (CMO). The first CMO was collateralized by $1 billion in recently originated conventional single-family mortgages. Since June 1983, there have been more than twenty offerings of CMOs in amounts ranging from $76 million to $1.25 billion. While four of the CMOs were offered by Freddie Mac, most of the others were issued by subsidiaries of home builders, mortgage bankers, and investment banking firms. Private-issue CMOs have typically been collateralized by seasoned GNMA pass-throughs (GNMAs) or by Fannie Mae CMBSs. The GNMAs have usually been secured by mortgages carrying interest rates of 10 to 13.5 percent. Moreover, although there has been a private CMO issue exceeding $1 billion, they have tended to be smaller in size than the Freddie Mac offerings.

The FHLMC CMO pools a very large number of loans and offers either three or four securities of varying maturities and coupons. The pool pays semiannual interest and principal from a sinking fund, directing principal prepayments to the security with the shortest stated maturity. The maximum weighted average lives of the bonds in the version with three securities (Series A and B) are 3.2, 8.6, and 20.4 years. Since these securities were introduced in 1983, they have traded at average yield spreads ranging from 20 to 90 basis points over the comparable maturity Treasury bond; however, there has been some narrowing in these yield spreads in early 1984. The two most recent FHLMC CMOs (Series C and D issued in January and April 1984) have included an interest accrual of zero-bond (16.8 or 18.8 years weighted average life) as the fourth class of securities. This bond shortens the weighted average life of each of the other three securities to 1.8, 4.3, and 7.8 years, respectively. Interest on the fourth class of bonds accrues but is not paid until the other three classes are fully retired.

The most important difference between the FHLMC and the private-issue CMOs is that FHLMC guarantees a repayment schedule for principal, usually at 75 percent or 100 percent of the FHA Section 203(b) experience for defaults

continued

and prepayments. Freddie Mac pledges to make semiannual sinking fund payments of a minimum scheduled amount, based on percentages of the outstanding balance on the bonds. If principal prepayments exceed the minimum schedule, they are passed through to the bondholders. However, if the principal payments fall short of the minimum schedule, FHLMC will make up the difference. The private-issue CMOs generally do not provide mandatory sinking fund payments, and the issuers only pledge that the cash flow from the collateral will be used to pay off the debt. Nevertheless, 1983 offerings of private CMOs totaled over $2.97 billion. Currently, issues of CMOs total more than $9.9 billion, and approximately $4.7 billion were outstanding at the end of 1983.[5]

The two most obvious advantages to the CMO are the bond-like cash flow characteristics of the securities and the availability of several maturity classes. Offering securities of various maturities allows one CMO to "tap" several different segments of financial markets at the same time, attracting investors who otherwise would not buy GNMAs, PCs, or CMBSs. The large pool FHLMC CMO, with its semiannual payments and sinking fund feature, has great appeal to long-term investors such as pension funds and life insurance companies.

Analyses performed by the research department at FHLMC[6] show that commercial banks, savings and loan associations, and insurance companies purchased the shorter maturity FHLMC CMO securities. Pension funds were the largest purchasers of the intermediate and long-term securities. These investors were 29 percent of CMO purchasers, while they are thought to be only 8 percent of PC investors. Commercial banks, at 18 percent, were the second most important investors in CMOs, followed by investment advisors (15 percent), thrifts (14 percent), and insurance companies (13 percent). As far as PCs are concerned, thrifts are the largest holders at 56 percent, followed by pension funds and insurance companies each with approximately 8 percent.

> "The power to attract new savings and the restructuring of portfolios through swaps and loan sales were clearly the most important operational developments accounting for the renewed health of the thrifts."

Determining the yield

CMOs offer higher yields than other investments of similar quality and maturity because the actual life of the bond and, consequently, the actual yield to maturity are not perfectly predictable. However, CMOs are able to offer more certainty than traditional pass-throughs because they are ultimately backed by very large pools of mortgages.[7] The use of a large mortgage pool provides a sufficiently large number of loans such that the law of large numbers will ensure prepayment according to some standard or, at least, guarantee some consistency in the variation in the prepayment flows. However, although CMOs offer substantial advantages over pass-throughs, as long-term mortgage investments their actual yields to maturity are still prone to the uncertainties associated with the effects of unanticipated prepayment of principal by the underlying mortgages.

CMO quoted trading yields and yield spreads (over comparable Treasuries) are partly determined by an assumed weighted average life for each security class. Thus, the assumed weighted average life (WAL) substantially affects the yield quoted on the security at purchase or settlement. On the other hand, the actual life of the security depends on the actual rate of prepayment, which will determine the instrument's actual yield to maturity. Recently, analysts at Salomon Brothers Inc have questioned the assumption of 100 percent FHA experience, which has been used in calculating the yields on several of the private issue CMOs. They provide evidence that the GNMA collateral backing some of the private issue CMOs seems to be paying closer to an assumption of 75 percent FHA. The use of a 100 percent FHA assumption, other things being equal, will tend to increase the yield and yield spread, making it seem like a more attractive investment than it may actually be.[8] Regarding the FHLMC CMOs, the only available prepayment data are for the first semiannual payments on the shortest maturity securities in the first two Freddie Mac CMOs. They show that the first two payments have occured at rates of 160 percent and 87 percent of FHA.[9]

The jury is still out

The bottom line is that mortgage-related securities will be unavoidably subject to unanticipated principal prepayment behavior regardless of the size of the pool or the extent of the detail of knowledge on prior prepayment experience. The FHLMC CMOs and private issue CMOs have been effectively marketed to investors who otherwise may not have purchased pass-through types of mortgage-backed securities. However, it is still not clear whether CMOs will be perceived over the long haul to have the proper characteristics to be strong competitors to corporate bonds in the battle for the long-term investment dollar. The only way a mortgage-related security can approximate a bond pay-out with certainty is if the mortgage bond allows active management of the cash flow and provides certain features that maximize call protection for the investor.

The TIMs proposal

In 1983, the Reagan Administration proposed legislation that would provide incentives for increased issuance of mortgage-backed bonds by private issuers. The Trusts for Investment in Mortgages (TIMs) proposal involved develop-

continued

ing a new set of regulatory and tax rules within which new mortgage-related securities could be developed. Currently, in order for mortgage pass-throughs to avoid taxation at the pool level, they must qualify as a Grantor Trust requiring that they comply with one of several publicly written tax rulings issued by the Treasury Department. Otherwise, a special private ruling must be obtained. The TIMs proposals would obviate the need for these special rulings and would allow TIMs issuers to have broad authority in designing mortgage-backed securities as business trusts. Under TIMs, mortgage securities will offer several features that appeal to the needs of long-term investors. These features include active management of cash flows to achieve a maximum of call protection for investors, semiannual payment of interest and annual payment of principal, multiple classes of securities, and other features that would enhance the bond-like nature of these instruments.[10] It is apparent that passage of some type of TIMs legislation would create the opportunity to structure mortgage-backed securities with payment characteristics similar to bonds.

Recently this legislative proposal was withdrawn, at least partially because of opposition from housing industry groups and the financial community. A major objection to this particular piece of legislation was that it would prohibit FHLMC and FNMA from issuing TIMs-type securities and would not allow federal agency securities or those having a federal guarantee to be used as collateral for TIMs securities. Opposition groups contend this would even restrict FHLMC and FNMA from issuing CMOs. The financial community was opposed to this particular form of TIMs legislation because Wall Street places a high value on agency securities because of the federal backing. It is assumed by the investment community that backing by GNMAs, PCs, or FNMA CMBSs is necessary for triple-A ratings on private issue CMOs. Therefore, even in a world with TIMs-type securities, the financial markets would seem to prefer some federal agency backing for the security.

"The long-term future for CMOs backed by GNMAs is almost totally dependent on the volume of FHA and VA business."

Implications for the future

There have been significant structural changes in the mortgage lending business that will have lasting effects on the behavior of primary market lending institutions, primary market instruments, and mortgage-related securities such as CMOs. In 1983, the thrifts rebounded to mortgage lending levels rivaling those of the late 1970s. Although the structural changes allowed through the Depository Institution Deregulation and Monetary Control Act of 1980 and the Garn-St Germain Act of 1982 gave thrifts the tools to find a closer match between the maturities of their assets and liabilities, they still will increasingly tend to rely on the secondary market. Analysts have pointed to the large volume of housing finance that will be needed until the late 1990s and the projected inability of depository lenders to provide those funds.[11] The housing finance sector will have to go to the financial markets to come up with the funds. Furthermore, from the lender's viewpoint, there are solid advantages to holding mortgage securities instead of whole loans (while still maintaining servicing). Consequently, except in the case of adjustable rate mortgage loans (ARMs), there should be no short-term or long-term decline in thrifts' reliance on secondary mortgage markets.

Future of CMOs

The short-term picture for the issuance of CMOs is much more clouded. For the near-term, the future of CMOs will be determined primarily by the supply of GNMAs and their yield spread over long Treasuries. However, this outcome will be at least partially dependent on the course of interest rates over the next few months. If interest rates continue to rise by the middle of the summer of 1984, there could be further declines in the originations of pool securities as originations of fixed-rate loans level off. The recent increase in the acceptance of ARM loans suggests that a continuing shift into ARMs will depress the issuance of pool securities as interest rates rise.[12]

Another short-term factor analysts feel may limit the issuance of CMOs is the gradually shrinking yield spread between mortgage-backed securities and Treasuries. As these yield spreads decline, Treasuries become more attractive relative to pass-throughs for investors who are concerned with the "quality" of their portfolios. Currently, these differentials range from about 80 percent to 100 basis points, and they have steadily narrowed over the last six months.[13]

Financial analysts speculate that one reason for this narrowing is that investors have been bidding up the prices of GNMAs and FNMA CMBSs (relative to Treasuries) anticipating additional CMO offerings that would be collateralized by these securities. However, a countervailing factor to continued speculation in pass-throughs is the impact of additional CMO offerings on CMO yields relative to pass-throughs. As arbitrage activity in CMOs increases, the yield on the CMO will be driven closer to the yield on the GNMA or FNMA collateral. At some point, the spread to the CMO issuers may not be sufficient to compensate for the various up-front costs and marketing fees on CMOs. Thus, in the near-term, internal market pressures may tend to depress the profitability in issuing these types of obligations.

The long-term future for CMOs backed by GNMAs is almost totally dependent on the volume of FHA and VA business. The removal of the FHA ceiling rate and the recent changes that allow borrowers and lenders to negotiate points and rates should make FHA a

continued

more attractive alternative for both buyers and sellers. This factor should work to increase the volume of FHA and GNMA pass-throughs, helping to maintain the yield spread over Treasuries. Correspondingly, the long-term future for CMOs backed by conventional loans will ultimately be determined by the volume of fixed-rate lending and the perceived benefits of CMO-type securities. The long-term use of adjustable rate mortgages will play an important role regarding the supply of conventional fixed-rate loans. The prepayment experience of the FHLMC CMOs will fill out the other side of the equation.

The major long-term factor that will affect the issuance of present-day conventional CMOs is the ultimate acceptability of adjustable rate mortgages. However, in the long-term ARMs are more likely to be originated and held by lenders instead of making their way into the secondary market as collateral for pass-throughs or bonds. While portfolio lenders such as S&Ls may not need to rely as much on secondary market sales by holding ARMs, non-portfolio lenders will still rely on securitization of mortgage loans. The recent Freddie Mac ARM survey[14] found that 91 percent of mortgage bankers are originating ARMs, along with 83 percent of S&Ls. Obviously, many of these ARMs made by mortgage companies are being sold to private investors. The fact that there is an investor interest in these loans suggests that the future of the secondary market securitization function may also be tied to the development of a pass-through or CMO-type of security backed by adjustable rate loans.

In 1983, the secondary market set a record for the volume of mortgage pass-through securities issued. It also witnessed the introduction of a new type of mortgage-backed bond. This increased reliance by primary mortgage lenders on mortgage securitization should not be expected to decline in the near future. Correspondingly, the ability of the housing finance industry to tap financial markets for needed funds will probably increase in the near-term and long run. Only increased innovation in both primary and secondary market instruments will allow the housing finance industry to compete effectively for the necessary funds over the next decade. □

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[1]*See Virginia K. Olin, "Sources and Uses of Funds in the Third Quarter 1983," Journal of the Federal Home Loan Bank Board, November 1983; and "Sources and Uses of Funds in the Fourth Quarter 1983," Journal of the Federal Home Loan Bank Board, April 1984.*

[2]*For a more complete discussion of portfolio restructuring in the S&L industry, see the two following papers by Joseph Hu of the Bond Market Research group at Salomon Brothers Inc: "The Secondary Residential Mortgage Market—Its Recent Growth and Prospects," (March 1983); and "Major Developments in Housing and Mortgage Finance in 1983," (January 1984).*

[3]*Kevin E. Villani, "The Secondary Mortgage Markets: What They Are, What They Do, and How to Measure Them," Secondary Mortgage Markets, February 1984, FHLMC.*

[4]*For example, often mortgage bankers originate loans that are purchased by thrifts for their portfolios. The HUD surveys only provide data on total originations by mortgage bankers or total purchases by thrifts. Therefore, this type of transaction cannot be accurately measured. Moreover, even if we could estimate these flows, it is not clear whether this kind of transaction should be considered as a secondary market sale.*

[5]*See "Use of CMO Structure Grows Rapidly," Freddie Mac Reports, January 1984.*

[6]*See footnote 5 and also A. Thomas King and D. Andrukonis, "Who Holds PCs?" Secondary Mortgage Markets, February 1984.*

[7]*A large FHLMC CMO pool may contain upwards of 15,000 loans, while a typical GNMA with a $2 million principal may contain only 40 to 50 loans. Typical FHLMC PC pools contain about 2,000 to 3,000 loans. For an analytical discussion of the relationship between prepayment and pool size, see Dexter Senft, "Fast-Pay GNMAs: Fact or Fallacy?" Mortgage Banking, September 1981.*

[8]*The use of a 100 percent FHA assumption, rather than 75 percent FHA, implies faster prepayment. This tends to result in a shorter weighted average life and a higher quoted yield spread relative to the comparable Treasury, especially if the security is assumed to be purchased at a discount. For a detailed analysis of the effects of alternative prepayment assumptions on CMO yields, see Michael Waldman, "A Closer Look At CMO Quoted Yield Spreads," (March 9, 1984), Salomon Brothers Inc, New York.*

[9]*"CMO Paydowns Can Impact Yield," National Thrift News, April 2, 1984, Vol. 8, No. 19, pp. 1, 26.*

[10]*A good non-technical discussion of TIMs is presented in "Mortgage-Related Securities—Review and Comment—Special Report, March 15, 1983," a memorandum by the Fixed Income Research Department of The First Boston Corporation, New York.*

[11]*Dwight M. Jaffee and Kenneth T. Rosen, "The Demand for Housing and Mortgage Credit: The Mortgage Credit Gap Problem," Housing Finance in the Eighties: Issues and Options, Papers and Proceedings, The Federal National Mortgage Association, May 1981.*

[12]*The monthly Federal Home Loan Bank Board surveys showed that adjustable rate mortgages were originated at an average monthly rate of 37 percent of originations by all lender types in 1983; however, in the last quarter, the average monthly rate increased to 53 percent of originations. These surveys exclude assumptions, refinances, and FHA/VA originations.*

[13]*As of May 25, 1984, seasoned GNMA's (13 percent coupon), FNMA CMBSs (13.5 percent), FHLMC PCs (13.5 percent), and Norwest Conventional Pass-Throughs (12-1/8 percent) were trading at yield spreads of 82, 84, 79, and 85 basis points, respectively, above a seasoned 10-year Treasury. Over the previous six months, the spreads for these four securities averaged 104, 128, 119 and 102 basis points, respectively. Over the same period, these four securities traded at maximum spreads of 143, 180, 169, and 151 basis points, respectively. Source: "Biweekly Mortgage Market Roundup (May 14-25) May 29, 1984," Bond Market Research Department, Salomon Brothers Inc, New York.*

[14]*"What Makes An ARM Successful? A Report on the Market for Adjustable Rate Mortgages," Federal Home Loan Mortgage Corporation, Publication No. 53C.*

Mortgage Market Trends

Prepared by MBA's Economics Department

May 18, 1984

The moderate level of economic activity in late 1983 rebounded in the first quarter of 1984 to an 8.8 percent rate of growth. This increase in the first quarter output was chiefly due to large increases in expenditures for personal consumption plus investment by business in inventory. Most observers had expected the moderate rate of economic activity to continue, and until data showing a deceleration in growth are published, renewed fears of long-term inflation will have a negative impact on the investment markets. While the data released in March 1984 led observers to predict declines in interest rates following less restrictive Federal Reserve policies, what occurred in March was further policy action to tighten credit availability.

Recently released statistics do not demonstrate cause for optimism that the Fed will loosen its hold on money and credit in the next several months. Its principal objective at present is the maintenance of price stability. Less restrictive money growth, without a slowing of overall real growth, would only add to a resurgence of an inflationary climate. The Fed, without a doubt, is willing to err on the side of caution at this juncture.

Expenditures by both consumers and business have continued in recent months. The early pent-up demand for consumer goods that was demonstrated early in 1983 apparently has not yet worked through the economy. Increases in employment and earnings have thus far sustained the pace of spending beyond that which was earlier expected. Further investment in inventories and equipment necessary to meet this demand has in turn been required by business lest they forego potential sales opportunities.

Following a lull in March 1984, retail sales rose a strong 3 percent in April with durable goods climbing almost 5 percent. Auto sales were an important factor, jumping an impressive 7 percent during the month. Because consumers generally finance most of their durable goods expenditures, installment credit growth in April should at least match its 18 percent annual rate reflected in March.

Inventory building, responsible for roughly half of the first quarter growth, showed a solid rise in March, indicating businesses feel a need to acquire additional supplies and finished goods. A continued rise in industrial production in March 1984, the 17th consecutive monthly gain, further confirms consumer demand at the retail level. However, with the utilization rate at 81.9 percent of capacity, further expensive investment in plant and equipment would be required.

Because of the prominent position of housing activity in the recent recovery, housing construction will continue to play an important role as the economy moves from recovery to expansion. Private housing starts during the first four months of this year rose 19 percent, when compared to the same period last year. Inventories of unsold homes also remain at historically low levels as demand continues unabated. A portion of this demand is due to the acceptance of adjustable rate mortgages in the marketplace. The unusually high rate of new housing starts, about 1.9 million annually in April, will peak shortly and trend downward as consumers hesitate to take on new debt at higher rates.

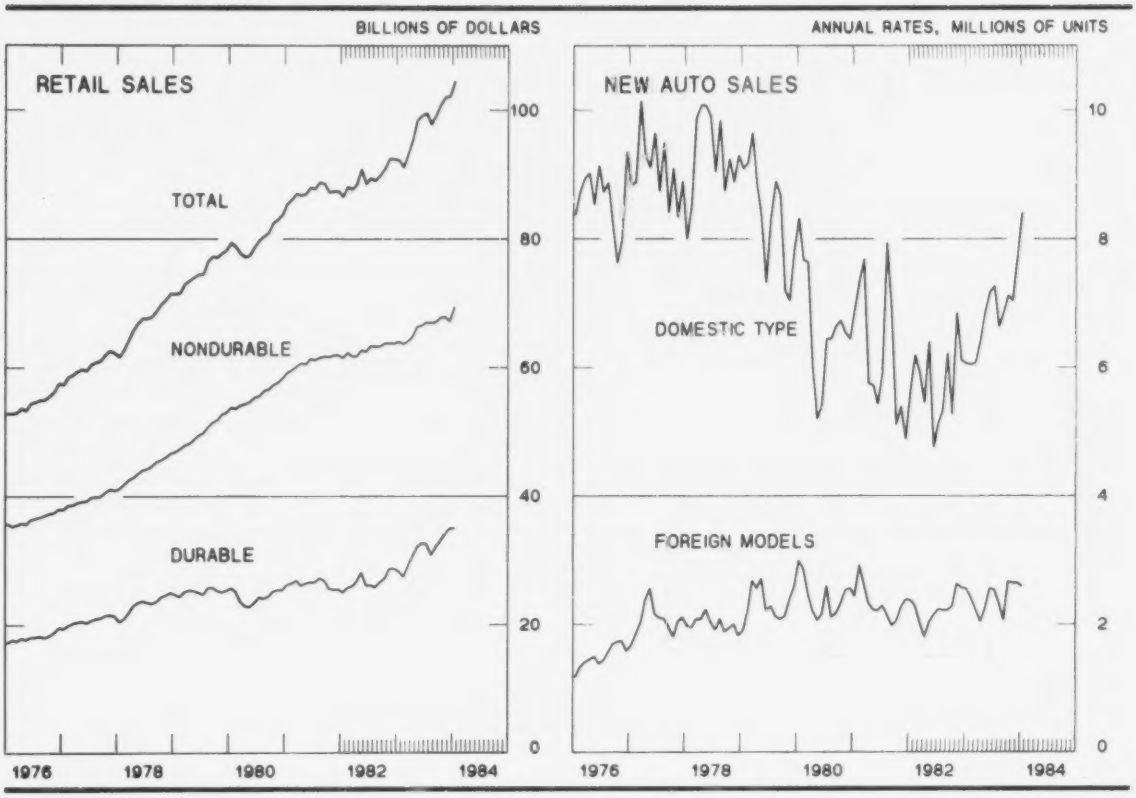
As a result of this level of activity, short-term rates have climbed over 100 basis points since January 1984, and upward movement remains in the market. One-year Treasuries, a frequently used index for ARM lending, are up 130 basis points from January, and 10-year Treasuries are yielding almost 100 basis points more over the same period. In the second week in May, the prime lending rate was raised to 12.50 percent, and the authorized rate on VA loans, a frequent benchmark for fixed-rate FHA lending, increased to 13.50 percent. The immediate impetus for this movement was a Federal Reserve policy decision in March to restrict monetary growth. The underlying growth in rate pressure comes from investor perceptions of expected inflation resulting from continued projected Federal deficits in the range of $175 to $200 billion. Institutional investors have had difficulty in selling new Treasury debt funding issues, thus forcing yields up in order to clear the market. Recent trading volume has been light, reinforcing these effects of decreasing demand. Mortgage interest rates maintained their relatively high level in April 1984 with fixed-rate loan yields approaching 13 percent. In April 1984, conventional fixed-rate loans closed at 12.91 percent, up from 12.82 percent in March 1984. The rate on ARMs for the same period was 11.57 percent, accounting for 60 percent of all conventional loans closed. With the recent rise in the VA-authorized rate to 13.5 percent, long-term yields are now approaching the 14 percent level for fixed-rate mortgages.

The outlook for the next few months is dependent upon investor reaction to economic statistics and their reflection of overall activity. Yields may move up five to 10 basis points, accompanied by broad fluctuations, depending on the most current news. The economic prospect into the fall is highly dependent on fiscal policy and Federal Reserve action in response to overall economic growth. With slower growth likely, the Fed should respond with an easing of monetary policy and a generally more optimistic environment. Under this scenario, yields on short-term loans would decline almost as much as they have risen since January 1984, and long-term yields would follow suit.

Gregory Luetscher
Assistant Economist

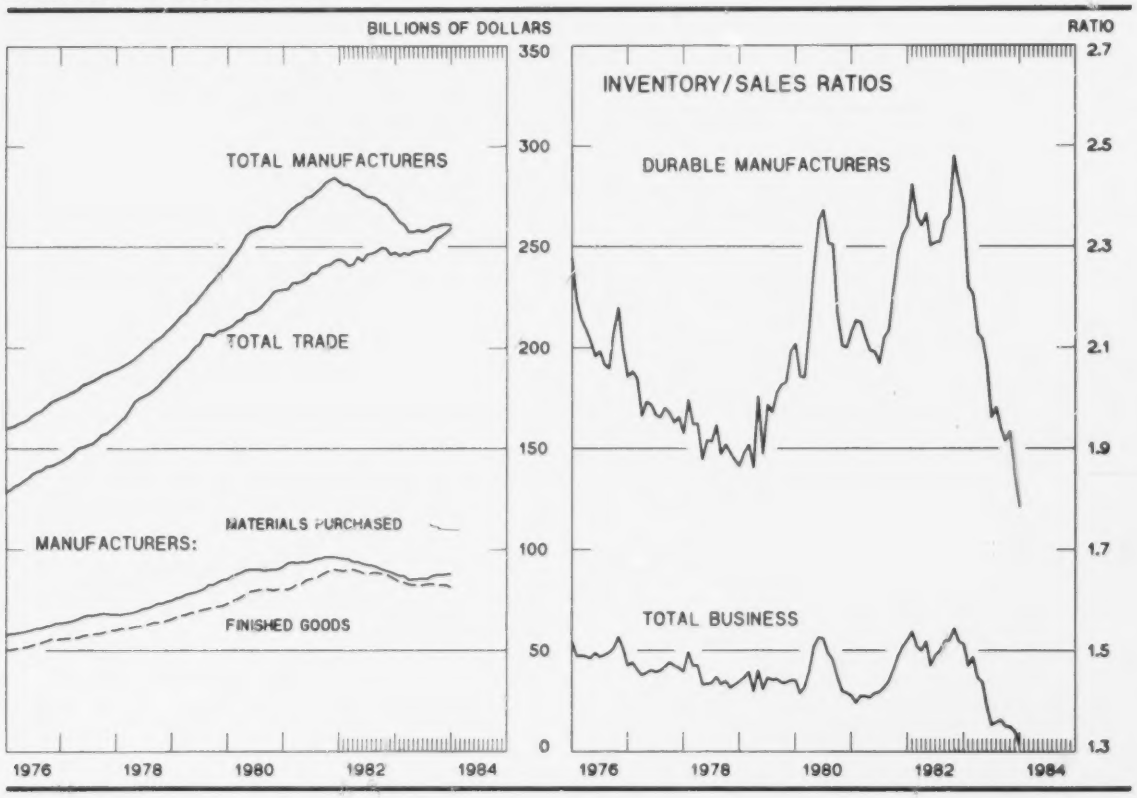
RETAIL TRADE

SEASONALLY ADJUSTED, MONTHLY



INVENTORIES

SEASONALLY ADJUSTED, END OF MONTH



MORTGAGE MARKET TRENDS—JUNE 1984

RESIDENTIAL STRUCTURES, BY UNIT TYPE
(Units in thousands)

Year and Month	PERMITS 16,000 ISSUING PLACES						HOUSING STARTS					
	Actual			Seasonally Adjusted Annual Rate			Actual			Seasonally Adjusted Annual Rate		
	Total	1-4 Units	5+ Units	Total	1-4 Units	5+ Units	Total	1-4 Units	5+ Units	Total	1-4 Units	5+ Units
1983												
JAN	85	56	29	1,447	1,996	461	92	64	29	1,632	1,184	448
FEB	93	56	36	1,479	949	530	96	66	30	1,706	1,182	524
MAR	135	91	44	1,467	985	482	135	95	40	1,592	1,119	473
APR	138	93	45	1,536	982	554	136	103	33	1,549	1,143	406
MAY	149	104	45	1,635	1,076	559	175	124	51	1,779	1,252	527
JUN	171	114	57	1,761	1,160	601	173	125	48	1,743	1,242	501
JUL	147	92	55	1,782	1,057	725	162	113	49	1,793	1,175	618
AUG	153	97	56	1,652	1,007	645	177	121	56	1,873	1,233	640
SEP	148	90	58	1,506	967	539	155	108	47	1,679	1,153	526
OCT	140	87	53	1,630	1,022	608	159	102	57	1,672	1,113	559
NOV	125	79	46	1,642	1,053	589	136	93	43	1,730	1,204	526
DEC	107	65	42	1,549	1,039	510	107	69	38	1,694	1,154	540
1984												
JAN	110	67	43	1,817	1,154	663	109	75	34	1,980	1,415	565
FEB	125	78	47	1,946	1,260	686	128	88	40	2,231	1,592	639
MAR	147p	99p	48p	1,714p	1,128p	586p	135p	96p	39p	1,638p	1,174p	464p
3 month												
1984	382	244	138				372	259	113			
1983	313	203	109				323	225	99			
1982	177	113	65				179	129	50			
1981	243	165	78				261	192	72			

VALUE OF NEW CONSTRUCTION PUT IN PLACE
(Dollars in millions)

Year and Month	Seasonally Adjusted Annual Rate			
	Total	1 Unit	2+ Units	Non-Res.
1983				
JAN	128,757	45,650	17,775	65,332
FEB	131,430	49,869	18,907	62,654
MAR	133,662	53,374	18,958	61,330
APR	134,876	57,134	20,130	57,612
MAY	139,801	61,926	20,300	57,575
JUN	147,929	65,797	22,124	60,008
JUL	152,028	67,598	25,082	59,348
AUG	157,313	68,746	26,025	62,542
SEP	157,582	68,337	26,614	62,631
OCT	151,063	66,327	25,807	58,929
NOV	154,272	65,385	26,525	62,362
DEC	156,642	64,924	27,721	63,997
1984				
JAN	162,209	67,769	27,413	67,027
FEB	170,020	72,406	27,881	69,733
MAR	171,028p	73,270p	27,245p	70,513p

HOUSE SALES
(Units in thousands)

Year and Month	EXISTING HOUSES[1]	NEW HOUSES		
		Sold	Available For Sale	Months Supply at Current Rate
1983				
JAN	155	44	256	5.2
FEB	163	46	253	5.4
MAR	237	57	259	5.2
APR	236	59	264	5.0
MAY	259	64	271	4.9
JUN	238	59	283	5.3
JUL	260	51	288	5.8
AUG	280	50	296	6.3
SEP	240	48	302	6.4
OCT	224	51	302	5.8
NOV	202	45	309	5.9
DEC	180	48	303	4.7
1984				
JAN	178	52	301	5.4
FEB	202	57	307	5.4
MAR	264p	62p	317p	5.9p
3 month				
1984	644	141		
1983	555	147		
1982	421	86		
1981	564	124		

RESIDENTIAL STRUCTURES, BY REGION
(units in thousands)

Year and Month	PERMITS 16,000 ISSUING PLACES								STARTS							
	Actual				Seasonally Adjusted Annual Rate				Actual				Seasonally Adjusted Annual Rate			
	North East	North Central	South	West	North East	North Central	South	West	North East	North Central	South	West	North East	North Central	South	West
1982																
DEC	8	7	41	21	112	148	738	307	8	7	47	21	122	155	714	289
1983																
JAN	6	6	52	21	152	188	764	343	5	6	63	18	151	216	958	307
FEB	8	6	57	22	185	163	794	337	7	8	58	24	233	256	874	343
MAR	11	14	82	28	136	173	835	323	13	13	80	29	191	203	854	344
APR	14	16	74	34	165	172	832	367	14	18	75	30	170	196	843	340
MAY	15	20	77	38	148	194	885	408	17	25	93	40	165	228	984	402
JUN	19	21	86	45	183	201	930	447	18	25	89	42	175	216	935	417
JUL	16	17	78	36	181	186	1,004	411	18	23	82	39	166	230	979	418
AUG	18	21	77	37	182	202	870	395	22	25	92	38	186	237	1,015	435
SEP	18	21	73	36	176	177	765	388	15	23	84	34	138	221	938	382
OCT	15	20	72	33	159	195	878	398	16	23	87	33	160	197	947	368
NOV	13	16	68	29	150	187	907	398	14	18	75	30	156	214	939	421
DEC	11	9	56	30	168	179	778	424	9	9	63	25	148	214	955	377
1984																
JAN	7	8	63	33	169	245	878	525	7	9	61	32	195	319	927	539
FEB	10	11	68	35	245	283	901	517	9	11	76	32	315	345	1,109	462
MAR	14p	16p	75p	42p	182p	208p	801p	523p	11p	15p	75p	34p	175p	230p	814p	419p
3 month																
1984	31	35	206	110					27	35	212	98				
1983	25	26	191	71					25	27	201	71				
1982	14	13	112	38					13	12	119	35				
1981	19	28	133	61					16	29	138	58				

CONSTRUCTION STATUS
(units in thousands)

Year and Month	UNDER CONSTRUCTION			COMPLETIONS		
	Total	1-4 Units	5+ Units	Total	1-4 Units	5+ Units
1982						
DEC	718	439	279	96	68	28
1983						
JAN	728	442	286	81	60	21
FEB	747	456	291	78	53	25
MAR	835	517	318	91	69	22
APR	832	516	316	90	69	21
MAY	901	565	336	106	75	31
JUN	951	597	354	123	93	30
JUL	988	615	373	120	91	29
AUG	1,010	629	381	155	106	49
SEP	1,025	632	393	133	99	34
OCT	1,025	620	405	153	110	43
NOV	1,035	616	419	125	94	31
DEC	1,003	582	421	138	102	36
1984						
JAN	995	578	417	112	76	36
FEB	1,013	590	423	109	77	32
MAR	1,032	608	424	117	80	37
3 month						
1984				338	233	105
1983				250	182	68
1982				207	138	69
1981				287	215	72

INTEREST RATES AND YIELDS

Year and Month	1-4 UNIT MORTGAGES					APARTMENTS[4]	CONSTRUCTION LOANS[5] ALL TYPES	FNMA		GNMA Current Securities Yield[7]	SELECTED SECURITIES				SPREADS (Basis Points)	
	FHA Opinion Survey			FHLBB Survey				Mandatory Delivery Yields			Aaa Utility[9] New Issue	U.S. Gov't.		Prime Commercial Paper		
	FHA New[3]	Conventional		Conventional				ARM (5 yr Treas.)	Conv.			10-yr.	26-wk.	90-119 Days	FHA New Minus Aaa Utility	GNMA minus 10-yr. Gov't.
		New	Existing	New	Existing											
1983																
JAN	12.87	13.44	13.45	13.49	13.54	13.88		12.097	13.000	11.89	12.05	10.46	7.898	8.17	82	143
FEB	12.65	13.18	13.19	13.16	13.40	13.75		12.376	12.875	12.20	12.08	10.72	8.433	8.34	110	148
MAR	12.68	13.17	12.85	13.51	13.04	13.63	12.56	11.916	12.920	11.82	11.70	10.51	8.325	8.52	98	131
APR	12.50	13.02	13.07	12.42	12.88	13.50		11.955	12.775	11.78	11.41	10.40	8.343	8.53	109	138
MAY	12.41	13.09	13.09	12.67	12.82	13.63	11.72	11.470	12.583	11.54	11.32	10.38	8.20	8.33	109	116
JUN	12.96	13.37	13.38	12.36	12.67	14.00		12.480	13.163	12.03	11.87	10.85	8.89	9.00	109	118
JUL	14.23	14.00	14.01	12.50	12.63	14.50		12.978	13.638	12.80	12.32	11.38	9.26	9.25	191	142
AUG	13.78	13.90	13.92	12.38	12.72	14.38	12.99	13.195	13.688	13.22	12.25	11.85	9.51	9.54	153	137
SEP	13.55	13.60	13.62	12.54	12.85	14.24		12.863	13.213	12.78	12.53	11.65	9.15	9.24	102	113
OCT	13.23	13.52	13.53	12.25	12.65	14.11		12.575	12.963	12.58	12.43	11.54	8.83	8.99	80	104
NOV	13.23	13.48	13.49	12.34	12.58	14.15	12.94	12.787	13.012	12.62	12.64	11.69	8.92	9.10	59	93
DEC	13.25	13.42	13.42	12.42	12.39	13.95		12.870	13.050	12.65	12.62	11.83	9.17	9.53	63	82
1984																
JAN	13.08	13.28	13.27	12.29	12.16	13.49		12.763	12.825	12.46	12.99	11.67	9.01	9.20	9	79
FEB	13.20	13.31	13.32	12.23	12.19	13.98	11.92	12.863	12.938	12.48	13.05	11.84	9.18	9.32	15	64
MAR	13.68	13.57	13.58	12.11	12.23	14.29		13.213	13.263	n.a.	13.63	12.32	9.66	9.83	5	n.a.

LONG-TERM MORTGAGE LOANS CLOSED

(Dollars in Millions)

Year and Month	BY TYPE OF INSTITUTION					BY TYPE OF UNIT, AND INSTITUTION													
						1-4 Units					5+ Units					Nonresidential			
	Total	Mtg. Bankers	S&Ls	Banks[a]	Life Cos.	Total	Mtg. Bankers	S&Ls	Banks[a]	Life Cos.	Total	Mtg. Bankers	S&Ls	Banks	Life Cos.	Total	Mtg. Bankers	S&Ls	Banks[a]	Life Cos.
1982																			
SEP	10,467	2,250	3,858	3,855	474	7,541	2,090	3,130	2,276	45	593	50	295	226	22	2,333	140	433	1,353	407
OCT	10,724	2,850	3,529	3,764	581	7,447	2,290	2,817	2,296	44	761	320	216	210	15	2,516	240	496	1,358	522
NOV	12,230	3,240	4,026	4,458	506	8,907	2,770	3,148	2,935	54	682	200	337	107	38	2,611	270	541	1,416	414
DEC	18,448	4,720	6,443	5,724	1,561	12,761	4,210	4,778	3,705	68	1,125	150	605	297	73	3,562	360	1,060	1,722	1,420
1983																			
JAN	15,610	4,710	4,755	5,371	780	10,695	3,880	3,621	3,146	54	1,532	650	529	312	45	3,389	180	605	1,913	757
FEB	16,396	4,450	5,290	5,987	669	11,562	3,980	3,946	3,593	44	1,084	170	383	453	83	3,750	300	761	1,941	805
MAR	21,468	5,910	7,577	6,965	1,016	15,824	5,050	5,877	4,839	54	1,113	70	677	285	82	4,531	790	1,023	1,841	902
APR	20,459	6,050	7,942	5,651	756	14,661	4,790	6,292	3,523	56	1,884	890	656	288	50	3,910	400	990	1,870	650
MAY	22,111	5,590	8,348	7,354	819	15,670	4,740	6,903	3,970	57	1,397	300	549	490	58	5,044	550	896	2,894	704
JUN	29,936	7,120	10,936	10,354	1,526	20,993	5,950	8,683	6,268	92	2,621	910	916	645	150	6,322	260	1,337	3,441	1,284
JUL	24,310	5,810	10,275	7,230	995	18,650	5,450	8,297	4,839	64	1,191	30	759	331	71	4,469	330	1,219	2,060	860
AUG	28,942	5,730	11,291	10,042	1,879	20,755	5,000	9,197	6,501	57	1,725	220	740	523	242	6,462	510	1,354	3,018	1,580
SEP	24,331	4,470	10,331	8,115	1,415	16,815	3,660	8,127	4,979	49	1,569	220	774	439	136	5,947	590	1,430	2,697	1,230
OCT	21,235	4,300	8,586	7,121	1,228	14,927	3,630	6,823	4,407	47	1,501	170	759	410	162	4,807	500	1,004	2,284	1,019
NOV	20,938	5,340	8,202	6,039	1,357	14,606	4,690	6,317	3,549	50	1,501	100	783	699	219	4,531	550	1,102	1,791	1,088
DEC	26,024	4,970	10,553	6,793	3,138	15,858	4,860	7,441	3,455	102	2,254	110	996	849	299	7,912	570	2,116	2,489	2,737
1984																			
JAN	19,879	4,870	7,818	6,401	790	13,525	4,200	5,839	3,436	50	1,835	310	938	538	49	4,519	360	1,041	2,427	691

LONG-TERM COMMITMENT ACTIVITY

(Dollars in Millions)

Year and Month	OUTSTANDING					ISSUED DURING MONTH				
	Total	Mtg. Bankers	S&Ls	Banks[a]	Life Cos.	Total	Mtg. Bankers	S&Ls	Banks[a]	Life Cos.
1982										
SEP	50,444	9,800	18,241	13,108	9,295	10,089	4,240	3,888	1,466	495
OCT	53,690	12,570	19,328	12,512	9,280	13,094	6,740	4,024	1,620	710
NOV	59,572	15,660	20,785	13,457	9,670	15,456	7,290	5,017	1,819	1,330
DEC	61,755	16,320	21,548	14,267	9,620	15,487	6,110	6,082	1,991	1,304
1983										
JAN	62,967	16,520	22,945	13,802	9,700	15,693	7,010	5,555	1,928	1,200
FEB	69,199	18,840	25,677	14,965	9,717	16,887	6,466	7,271	2,086	1,070
MAR	72,413	18,500	28,864	15,217	9,850	22,322	7,660	10,291	3,073	1,298
APR	76,041	19,550	31,850	14,311	10,330	22,049	7,460	9,730	3,265	1,594
MAY	78,413	17,740	33,906	16,242	10,531	23,141	7,470	10,622	3,744	1,305
JUN	81,936	19,560	35,319	15,910	11,147	26,002	7,330	12,555	4,011	2,106
JUL	78,741	17,090	36,852	12,651	12,148	26,571	6,840	14,092	3,475	2,164
AUG	79,490	14,990	38,590	13,770	12,140	24,126	6,160	12,668	3,653	1,645
SEP	77,774	13,750	38,562	13,495	11,967	20,364	4,620	10,895	3,454	1,395
OCT	89,570	25,840	38,417	13,721	11,592	19,614	6,130	9,484	2,940	1,060
NOV	85,851	15,990	39,969	17,943	11,949	22,804	7,610	10,182	3,447	1,565
DEC	90,532	22,650	40,410	17,075	10,397	20,760	6,310	10,016	3,119	1,315
1984										
JAN	80,539	15,170	40,781	13,876	10,712	18,076	4,660	9,173	2,903	1,340
FEB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

MORTGAGE INSURANCE

(Units in Thousands, Dollars in Millions)

Year and Month	APPLICATIONS RECEIVED UNITS			INSURED					
		FHA/		Total		FHA (203)		VA		Private	
	Total	VA	Private	Units	Amt.	Units	Amt.	Units	Amt.	Units	Amt.
1982											
SEP	91	47	44	60	3,248	11	462	13	743	36	2,043
OCT	103	59	44	52	2,826	10	425	6	385	36	2,016
NOV	104	60	44	53	2,920	11	498	8	455	34	1,967
DEC	175	125	50	63	3,471	16	703	9	564	38	2,204
1983											
JAN	137	98	39	54	3,201	14	637	10	630	30	1,934
FEB	138	96	42	62	3,607	17	795	15	961	30	1,851
MAR	176	113	63	87	5,003	31	1,508	20	1,243	36	2,252
APR	180	117	63	96	5,483	39	1,867	19	1,190	38	2,426
MAY	165	91	74	101	5,959	24	1,152	30	1,911	47	2,896
JUN	233	145	85	139	8,015	60	2,938	24	1,541	55	3,536
JUL	182	102	80	115	6,863	38	1,854	20	1,224	57	3,785
AUG	205	106	99	139	8,665	31	1,641	35	2,193	73	4,831
SEP	152	66	86	161	9,702	56	2,922	33	2,092	72	4,688
OCT	141	58	83	125	7,752	26	1,362	30	1,934	69	4,456
NOV	131	51	80	131	7,980	34	1,772	25	1,598	72	4,610
DEC	136	46	90	118	7,594	20	1,046	22	1,448	76	5,092
1984											
JAN	121	45	76	109	7,017	14	753	24	1,544	71	4,720
FEB	124	45	79	101	6,467	20	1,093	22	1,449	59	3,925

SECONDARY MARKET ACTIVITY

(Dollars in Millions)

Year and Month	FNMA				FHLMC				GNMA	
	Portfolio		Mortgage Backed Securities		Comm. to Sell	Comm. to Buy	Mtg. Purc.	Sold	Pass-Through Securities	
	Comm.	Purc.	Outstanding	Issued					Applications	Issued
1982										
JUL	2,016	1,354	6,392	1,858	2,201	2,181	2,236	2,205	2,116	1,011
AUG	1,820	1,931	7,057	789	2,906	2,768	2,529	2,618	2,850	1,383
SEP	1,482	1,670	8,133	1,008	2,980	2,892	1,798	1,924	16,429	310
OCT	1,426	1,449	10,268	2,167	2,467	2,506	2,000	2,200	1,297	1,441
NOV	2,795	1,681	12,060	1,838	1,818	1,714	1,917	2,177	1,692	1,564
DEC	3,055	2,495	14,450	2,436	897	1,068	3,916	3,804	3,093	2,330
1983										
JAN	2,006	2,045	15,464	1,082	2,004	2,059	1,479	1,641	4,593	2,657
FEB	784	1,594	16,586	1,213	847	868	1,688	1,756	4,316	3,573
MAR	1,184	1,433	18,157	1,684	1,410	1,438	2,849	2,469	9,487	5,292
APR	1,023	1,004	19,138	1,152	2,149	3,079	1,807	1,525	6,423	4,359
MAY	1,534	1,579	20,064	1,160	2,881	2,334	2,439	1,408	6,687	4,654
JUN	2,506	1,333	20,933	1,097	2,319	2,358	1,494	1,244	6,444	5,246
JUL	1,198	1,358	22,313	1,651	4,621	4,671	1,523	1,491	5,468	4,363
AUG	1,282	1,213	23,078	1,052	5,592	6,367	1,621	1,585	7,976	5,943
SEP	2,739	1,203	23,819	1,018	3,183	3,283	2,263	1,555	6,749	4,200
OCT	1,882	1,244	24,311	750	2,382	2,598	2,886	2,758	3,891	3,808
NOV	997	1,348	24,475	381	1,596	2,093	1,287	1,139	4,201	3,857
DEC	1,471	2,204	25,121	841	1,261	1,704	1,685	1,121	4,046	2,543
1984										
JAN	1,772	1,285	25,182	251	1,293	1,470	1,419	978	2,500	2,718
FEB	1,929	1,507	26,124	1,126	1,128	1,386	1,389	813	4,422	3,030

MORTGAGE BANKERS CONSTRUCTION AND LAND LOAN ACTIVITY

(Dollars in Millions)

Year and Month	DISBURSEMENTS DURING MONTH					CONSTRUCTION LOANS CLOSED			
	Construction				Land Loans				
	Total	1-4 Units	5+ Units	Non-res.		Total	1-4 Units	5+ Units	Non-res.
1982									
JUL	110	40	20	50	40	430	50	250	130
AUG	100	40	20	40	60	540	90	200	250
SEP	110	40	20	50	40	320	80	130	110
OCT	130	70	20	40	30	230	100	110	20
NOV	130	80	10	40	30	430	130	220	80
DEC	170	70	30	70	60	490	120	110	260
1983									
JAN	100	50	20	30	60	280	120	30	130
FEB	150	60	30	60	60	280	110	60	110
MAR	170	80	20	70	50	540	180	190	170
APR	130	50	10	70	60	290	150	610	80
MAY	320	160	40	120	160	470	130	80	260
JUN	430	170	60	200	120	500	130	90	280
JUL	120	60	10	50	40	180	80	30	70
AUG	110	70	10	30	80	200	120	20	60
SEP	160	70	20	60	50	440	100	60	280
OCT	130	60	20	50	90	350	90	140	120
NOV	140	70	10	60	90	390	150	120	120
DEC	250	190	20	40	290	560	130	190	240
1984									
JAN	90	80	10	0	120	460	130	100	230
FEB	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

n.a.—Not available, p—Preliminary.
[1]From the National Association of Realtors' "Existing Home Sales" series.
[2]Reflects cumulative total through the latest month for each column.
[3]Secondary market gross yields.
[4]Federal Home Loan Mortgage Corp. Existing construction only.
[5]Federal Reserve's weighted average interest rate for Commercial Banks.
[6]Weighted average gross yields for accepted bids.
[7]Survey of three New York security dealers. Securities for immediate delivery.
[8]Mutual Savings Banks and Commercial Banks.
[9]As of January 1984 this rate is for A-rated recently offered utility bonds.

Sources: American Council of Life Insurance, Board of Governors of the Federal Reserve System, Bureau of the Census, Citicorp Real Estate Inc., Department of Housing and Urban Development, Federal Home Loan Bank Board, Federal Home Loan Mortgage Corporation, Federal National Mortgage Association, Government National Mortgage Association, Mortgage Bankers Association of America, National Association of Mutual Savings Banks, National Association of Realtors, Veterans Administration.

MORTGAGE BANKING ACTIVITY

LONG-TERM MORTGAGE LOANS CLOSED[1]

Year and Month	SEASONALLY ADJUSTED				NOT SEASONALLY ADJUSTED								
						1-4 Units				5+ Units			
	Total[2]	1-4 Units	5+ Units	Non-Res.	Total	Total	FHA	VA	Conv.	Total	FHA	Conv.	Non-[3] Res.
1982													
FEB	1,640	1,310	140	210	1,400	1,030	370	200	460	140	70	70	230
MAR	2,380	1,800	100	430	2,090	1,570	480	240	850	90	40	50	430
APR	2,190	1,790	80	300	1,940	1,550	450	250	850	80	20	60	310
MAY	2,350	1,820	260	340	2,090	1,660	530	290	840	150	50	100	280
JUN	2,550	2,110	110	300	2,530	2,160	670	400	1,090	130	120	10	240
JUL	2,170	1,730	50	280	2,230	1,950	610	370	970	50	50	0	230
AUG	2,040	1,860	70	320	2,450	2,130	720	420	990	70	10	60	250
SEP	1,960	1,820	30	140	2,280	2,090	700	490	900	50	10	40	140
OCT	2,470	1,890	510	250	2,850	2,290	840	550	900	320	90	230	240
NOV	3,370	2,950	200	260	3,240	2,770	1,190	690	890	200	140	60	270
DEC	4,140	3,870	130	180	4,720	4,210	1,620	1,020	1,570	150	0	150	360
1983													
JAN	5,230	4,350	580	270	4,710	3,880	1,720	940	1,220	650	30	620	180
FEB	5,220	5,060	170	270	4,450	3,980	1,640	970	1,370	170	0	170	300
MAR	6,730	5,780	80	800	5,910	5,050	2,180	1,350	1,520	70	40	30	790
APR	6,850	5,520	900	380	6,080	4,790	1,890	1,130	1,770	890	0	890	400
MAY	6,280	5,190	530	660	5,590	4,740	2,030	1,150	1,560	300	10	290	550
JUN	7,160	5,800	790	320	7,120	5,950	2,150	1,310	2,490	910	600	310	260
JUL	5,650	4,830	30	410	5,810	5,450	2,110	1,280	2,060	30	10	20	330
AUG	4,780	4,360	230	640	5,730	5,000	1,760	1,170	2,070	220	30	190	510
SEP	3,850	3,190	140	590	4,470	3,660	1,260	830	1,570	220	60	160	590
OCT	3,730	3,000	270	530	5,300	3,630	1,130	750	1,750	170	0	170	500
NOV	5,550	4,990	100	520	5,340	4,690	1,330	840	2,520	100	30	70	550
DEC	5,000	4,470	100	280	5,540	4,860	1,420	850	2,590	110	0	110	570
1984													
JAN	5,400	4,700	270	550	4,870	4,200	1,150	750	2,300	310	10	300	360

COMMITMENT ACTIVITY: LONG-TERM MORTGAGE LOANS

Year and Month	COMMITMENTS DURING MONTH								OUTSTANDING COMMITMENTS END OF MONTH					
	To Borrowers				From Investors				To Borrowers			From Investors		
	Total	1-4 Units	5+ Units	Non-Res.	Total	1-4 Units	5+ Units	Non-Res.	1-4 Units	5+ Units	Non-Res.	1-4 Units	5+ Units	Non-Res.
1982														
FEB	2,410	1,790	60	560	2,860	2,000	80	780	5,030	930	970	3,680	1,370	1,270
MAR	3,370	2,440	210	720	2,450	2,070	270	110	6,270	560	960	4,540	880	1,260
APR	3,630	1,830	330	1,470	4,450	2,510	300	1,640	5,950	640	1,630	5,280	730	1,600
MAY	3,380	2,070	390	920	3,460	2,130	420	910	6,460	740	1,060	5,450	1,430	1,220
JUN	2,560	2,140	130	290	2,780	2,170	140	470	6,430	630	1,040	5,860	1,090	1,230
JUL	2,700	2,070	70	560	3,880	3,000	110	770	6,440	680	1,460	6,340	1,020	1,690
AUG	3,050	2,550	240	260	3,970	3,450	260	260	7,300	850	900	6,320	1,200	980
SEP	4,240	3,970	60	210	4,870	4,360	130	380	8,030	1,100	670	7,960	1,750	840
OCT	6,740	5,080	1,010	650	4,090	2,560	1,020	510	10,850	950	770	7,830	1,590	950
NOV	7,290	5,740	490	1,060	6,010	3,990	950	1,070	13,260	1,490	910	10,010	2,250	1,160
DEC	6,110	5,230	170	710	5,330	4,170	180	980	14,680	800	840	9,400	1,180	1,040
1983														
JAN	7,010	5,550	880	580	5,140	4,250	80	810	14,370	1,240	910	8,920	1,380	1,140
FEB	6,460	5,850	290	320	6,160	4,690	630	840	15,840	1,960	1,040	8,260	2,260	1,420
MAR	7,660	6,060	1,390	210	9,130	6,560	1,830	740	15,450	2,130	860	9,750	2,480	1,160
APR	7,460	6,080	460	920	8,300	6,880	260	1,160	16,140	2,240	1,170	11,480	2,440	1,430
MAY	7,470	7,030	0	440	6,080	5,310	190	580	16,350	540	850	9,970	1,590	1,110
JUN	7,330	7,210	0	120	7,760	7,030	310	420	18,300	530	730	12,230	1,590	1,010
JUL	6,840	6,170	0	670	7,060	6,280	160	620	15,890	520	680	11,760	680	870
AUG	6,160	5,450	0	710	6,950	5,920	20	1,010	13,640	460	890	10,820	570	1,050
SEP	4,620	4,510	0	110	5,880	4,350	870	660	12,560	410	780	8,610	1,260	790
OCT	6,130	4,900	240	990	6,280	5,810	200	270	12,870	12,030	940	9,910	13,830	940
NOV	7,610	4,870	800	1,940	5,910	4,010	940	960	13,410	1,440	1,130	10,340	2,390	1,030
DEC	6,310	4,060	250	2,000	4,800	3,150	280	1,370	11,600	10,120	930	7,660	11,950	1,060
1984														
JAN	4,660	4,020	10	630	3,690	2,930	170	590	11,420	2,990	760	8,140	4,670	810

Notes: [1]All dollar amounts are in millions.
[2]Total is seasonally adjusted separately from components. Total, therefore, may not equal sum of parts.
[3]Series labeled non-residential are also inclusive of farm data.
[4]Percent coverage equals outstanding commitments received from investors divided by the sum of outstanding end of month inventory and outstanding commitments issued to borrowers, all multiplied by 100.

Year and Month	OUTSTANDING END OF MONTH INVENTORY									COVERAGE[a]			SERVICING VOLUME		
	Total	1-4 Units				5+ Units			Non-Res.	1-4 Units	5+ Units	Non-Res.	1-4 Units	5+ Units	Non-Res.
		Total	FHA	VA	Conv.	Total	FHA	Conv.							
1982															
FEB	5,590	2,910	590	440	1,880	1,540	280	1,260	1,140	46	55	60	204,960	25,450	40,430
MAR	5,670	3,370	700	400	2,230	970	130	840	1,330	47	58	55	216,430	29,520	40,140
APR	6,350	3,230	690	480	2,060	1,230	140	1,090	1,890	58	59	45	214,400	27,670	42,660
MAY	6,210	3,370	720	510	2,140	1,650	150	1,500	1,190	55	60	54	219,330	28,800	41,230
JUN	4,580	3,270	860	560	1,850	720	180	540	590	60	81	75	224,410	27,810	40,610
JUL	7,020	3,670	870	670	2,130	1,660	190	1,470	1,690	63	44	54	215,890	25,260	39,410
AUG	6,800	3,960	960	610	2,390	1,690	190	1,500	1,150	56	47	48	236,970	28,020	40,630
SEP	8,360	4,080	1,010	660	2,410	3,240	190	3,050	1,040	66	40	49	236,860	28,660	40,870
OCT	8,390	4,390	1,050	880	2,460	2,750	180	2,570	1,250	51	43	47	240,780	28,380	41,310
NOV	9,140	5,070	1,440	1,050	2,580	2,890	400	2,490	1,180	55	51	56	240,710	29,620	42,560
DEC	8,690	6,000	1,890	1,290	2,820	1,590	220	1,370	1,100	45	49	54	251,510	32,820	44,080
1983															
JAN	11,220	6,450	2,180	1,440	2,830	3,600	470	3,130	1,170	43	29	55	245,140	42,090	41,960
FEB	12,000	7,030	2,220	1,500	3,310	3,570	470	3,100	1,400	36	41	58	248,980	41,980	42,230
MAR	11,960	7,250	2,410	1,640	3,200	3,490	480	3,010	1,220	43	44	56	248,630	41,300	44,850
APR	12,080	7,170	2,340	1,700	3,130	2,760	10	2,750	1,000	49	49	66	262,050	43,670	43,790
MAY	11,200	6,930	2,510	1,700	2,720	3,470	10	3,460	800	43	40	64	267,170	44,300	41,940
JUN	12,920	8,260	2,780	1,850	3,630	3,480	10	3,470	850	46	40	64	294,020	51,230	45,180
JUL	11,960	7,760	2,490	1,710	3,560	3,410	0	3,410	790	50	17	60	305,860	43,090	42,620
AUG	11,480	7,190	2,170	1,600	3,420	3,400	0	3,400	890	52	15	59	289,220	41,800	39,150
SEP	10,870	6,530	1,870	1,460	3,200	3,440	10	3,430	900	45	33	47	264,720	44,760	33,870
OCT	11,060	6,590	1,780	1,460	3,350	3,550	210	3,340	920	51	89	51	274,860	44,100	38,970
NOV	11,450	6,990	1,800	1,380	3,810	3,240	0	3,240	1,220	51	51	44	292,100	48,620	40,400
DEC	10,860	6,050	1,570	1,250	3,230	3,500	550	2,950	1,310	43	46	47	259,530	46,690	39,600
1984															
JAN	15,620	6,420	1,390	1,150	3,880	8,300	10	7,390	900	46	41	49	283,720	51,610	36,130

CONSTRUCTION AND LAND LOAN ACTIVITY

Year and Month	DISBURSEMENTS DURING MONTH					CONSTRUCTION LOANS CLOSED				END OF MONTH INVENTORY				
	Total	1-4 Units	5+ Units	Non-Res.	Land Loans	Total	1-4 Units	5+ Units	Non-Res.	Total	1-4 Units	5+ Units	Non-Res.	Land Loans
1982														
FEB	110	40	20	50	70	340	60	50	230	2,540	600	640	1,300	600
MAR	90	50	10	30	50	480	90	60	330	2,320	570	570	1,180	570
APR	240	50	50	140	70	490	90	140	260	2,720	580	690	1,450	640
MAY	90	30	20	40	50	620	80	160	380	2,670	560	690	1,420	610
JUN	120	40	30	50	80	700	80	300	320	3,070	600	780	1,690	640
JUL	110	40	20	50	40	430	50	250	130	3,010	600	690	1,720	610
AUG	100	40	20	40	60	540	90	200	250	2,480	640	650	1,190	630
SEP	110	40	20	50	40	320	80	130	110	2,740	690	670	1,380	630
OCT	130	70	20	40	30	230	100	110	20	3,460	830	920	1,710	600
NOV	130	80	10	40	30	430	130	220	80	3,150	860	740	1,570	610
DEC	170	70	30	70	60	490	120	110	260	3,190	880	700	1,610	620
1983														
JAN	100	50	20	30	60	280	120	30	130	2,810	750	650	1,410	580
FEB	150	60	30	60	60	280	110	60	110	3,160	890	620	1,650	630
MAR	170	80	20	70	50	540	180	190	170	3,090	930	580	1,580	610
APR	130	50	10	70	60	290	150	610	80	2,030	610	330	1,090	680
MAY	320	160	40	120	160	470	130	80	260	7,290	2,080	1,140	4,070	1,600
JUN	430	170	60	200	120	500	130	90	280	7,400	2,120	1,080	4,200	1,580
JUL	120	60	10	50	40	180	80	30	70	2,580	810	380	1,390	660
AUG	110	70	10	30	80	200	120	20	60	2,410	760	340	1,310	650
SEP	160	70	20	70	50	440	100	60	280	3,120	950	430	1,740	650
OCT	70	50	20	0	90	130	60	20	50	3,220	990	430	1,800	750
NOV	100	50	50	0	90	140	70	10	60	3,150	1,010	350	1,800	750
DEC	250	190	20	40	290	560	180	40	340	8,490	2,710	940	4,840	1,550
1984														
JAN	90	80	10	0	120	180	70	20	90	3,490	1,050	430	2,010	650

Year and Month	COMMITMENTS TO BORROWERS: LAND AND CONSTRUCTION LOANS								NOTES PAYABLE			
	Issued During Month				End of Month Balances				End of Month Balances			
	Total	1-4 Units	5+ Units	Non-Res.	Total	1-4 Units	5+ Units	Non-Res.	Total	Comm. Paper	To Parent	To Others
1982												
FEB	680	60	190	430	7,530	540	3,340	3,650	10,910	1,260	5,700	3,950
MAR	890	170	160	560	6,420	630	2,000	3,790	11,790	1,330	7,030	3,430
APR	2,720	100	1,090	1,530	7,820	560	2,330	4,930	12,270	1,070	5,900	5,300
MAY	1,270	130	670	470	8,150	660	3,230	4,260	11,020	1,200	5,400	4,420
JUN	930	110	300	520	7,660	590	2,250	4,820	13,760	1,310	6,050	6,400
JUL	940	60	330	550	8,900	580	2,250	6,070	11,210	1,930	5,320	3,960
AUG	750	100	350	300	4,420	690	1,570	2,160	12,660	1,740	5,440	5,500
SEP	660	90	430	140	6,180	980	2,730	2,470	12,190	2,080	6,130	3,980
OCT	2,370	110	2,000	260	7,180	660	3,630	2,890	18,330	1,460	7,870	9,000
NOV	1,370	190	880	300	7,810	860	4,040	2,910	12,720	1,910	5,850	4,960
DEC	1,050	160	500	390	5,800	850	2,220	2,730	14,660	2,740	6,950	4,970
1981												
JAN	1,730	100	1,420	210	7,170	660	3,990	2,520	19,270	3,320	10,270	5,680
FEB	1,020	130	420	470	8,830	810	4,570	3,450	20,070	3,530	8,370	8,170
MAR	2,840	240	2,260	340	9,400	1,010	5,810	2,580	10,640	3,960	9,510	7,170
APR	1,350	140	500	710	8,400	980	4,900	2,520	20,120	3,330	10,200	6,590
MAY	1,070	120	610	290	6,280	650	3,900	1,730	25,640	3,780	10,460	11,400
JUN	1,410	160	550	700	6,780	970	3,710	2,100	36,620	4,490	10,570	21,560
JUL	1,970	120	1,750	70	7,160	910	4,660	1,590	36,150	4,410	14,000	17,640
AUG	900	180	100	620	5,620	940	2,480	2,200	35,370	8,920	10,920	15,530
SEP	1,100	100	690	310	5,210	870	2,190	2,150	41,300	3,110	9,820	28,370
OCT	1,640	130	990	520	22,330	1,080	18,890	2,370	30,150	2,760	8,870	18,520
NOV	1,770	130	890	750	8,520	1,270	3,960	3,290	32,200	3,690	10,520	17,990
DEC	3,450	100	2,310	1,040	19,710	1,030	15,450	3,230	29,590	2,770	7,140	19,680
1984												
JAN	1,080	80	400	600	10,900	800	7,440	2,660	31,180	3,900	9,810	17,470